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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/665,088

09/22/2003

Takanori Kamoto

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EXAMINER

FAISON GEE, VERONICA FAYE

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

12/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/665,088	Applicant(s) KAMOTO ET AL.	
	Examiner VERONICA FAISON GEE	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 54,56-58,60-76,78-80 and 82-96 is/are pending in the application.
- 4a) Of the above claim(s) 64-69,73,74,86-91,95 and 96 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 54,56-58,60-63,70-72,75,76,78-80,82-85,92-94 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment/Arguments

Claims 54, 75, 76 have been amended, claims 55, 77, 81 are canceled and claims 64-69, 73, 74, 85-91, 95 and 96 are withdrawn. Hence, claims 54, 56-76, 78-80 and 82-96 are pending in the application, however claims 64-69, 73, 74, 86-91, 95 and 96 are withdrawn due a restriction requirement and the election of Group I which was elected in response filed 4-7-05.

Applicant's amendment/arguments are persuasive to the extent that the rejections over Lauw, Koga et al, Nagashima et al have been withdrawn. However newly discovered art was found in the updating of the application and a new grounds of rejection is made below.

Terminal Disclaimer

The terminal disclaimer filed on 9-1-08 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 7,264,664 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 102

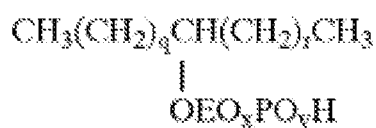
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 54, 56-58, 60-62, 71, 75, 76, 78-80, 82-84, and 93 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakatsu et al (US Patent 6,790,269).

Nakatsu et al teach an ink composition comprising a dye and/or pigment and water. The ink composition further comprises a nonionic surfactant having polyethylene oxide groups and polypropylene oxide groups of the following structure:



wherein q and r are respectively the numbers of methylene groups and satisfy the relation that $9 \leq q+r \leq 11$ (which appears to encompass structures IV and XII) (abstract, col. 2 lines 14-38, col. 3 lines 23-54). The reference further teaches that the nonionic surfactant is present in the amount of 0.001 to 2 percent by weight, that the pigment is a self-dispersing pigment and that a water-soluble organic solvent may be present in the amount of 30 percent by weight or more (col. 2 lines 41-55). The organic solvent comprising an ethylene glycol based ether including triethylene glycol based ether (col. 4 lines 23-28). The reference further teaches that the static surface tension is in the range of 25 dyne/cm to 50 dyne/cm (25 mN/m to 50 mN/m) (col. 5 lines 31-33). The reference discloses that the ink composition is subject to a printing experiment in a piezoelectric ink jet printer. The reference remains silent the all the components of the ink jet printing apparatus. However, piezoelectric printer inherently has the components as claimed by Applicant. The reference does not disclose the dynamic surface tension and the difference between dynamic and static surface tension. However, the

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composition of the reference is identical to the claimed composition and identical composition must have the same properties. See MPEP 2112.01 I. For these reasons, the composition of the reference is presumed to inherently possess the claimed properties. The composition as taught by Nakatsu et al appears to anticipate applicant's claimed invention.

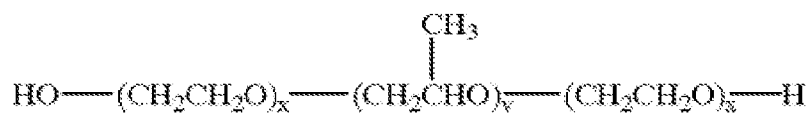
Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 54, 56-58, 60, 62, 63, 72, 75, 76, 78-80, 82, 84, and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fague (US Patent 6,193,792).

Fague teaches an ink composition comprises water, surfactant of the formula



(which appears to encompass formula V and XIII) wherein the molecular weight of the polypropylene oxide block is about 900 and the ethylene oxide blocks constitute about 80 percent by weight of the molecule, (c) colored pigment particles, and (d) uncolored precipitated colloidal silica particles (abstract, col. 4 lines 39-52). The reference further teaches that the aqueous medium is water or a mixture of water and

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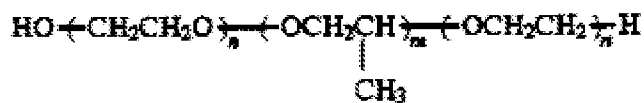
water soluble or water miscible organic component such as glycols, ethers, alcohols, and ketones (col. 4 line 56-col. 5 line 19). The surfactant is present in the amount of about 0.1 to about 5 percent by weight (col. 5 lines 32-35). The reference also teaches that colored pigment particles include Pigment Yellow 74, Pigment Blue 15:3, Pigment Red 122 and that may be present in the amount 0.1 to about 8 percent by weight (col. 5 line 39-col. 7 line 3). In the Examples the surface tension is Applicant claimed range. The reference teaches that the ink composition may be applied by ink jet printing (col. 8 line 50-col. 9 line 20). The reference discloses that the ink is incorporated into an ink jet printing apparatus, wherein the apparatus employs a thermal ink jet process, wherein the ink in the nozzles is selectively heated in an imagewise pattern (col. 8 lines 31-65). The reference remains silent to the difference of surface tensions. However, it is the position of the Examiner that if the static surface tension is achieved with a surfactant claimed by Applicant that the composition would obviously have a similar dynamic surface tension to yield the difference of surface tension, absent tangible evidence to the contrary.

The reference fails to teach the specific formula set forth by structures V and XIII. However, it is a Prima facie obviousness for chemical compositions may be established by showing structural similarity in combination with similarity in chemical properties. *In re Merck* 231 USPQ 375 (Fed. Cir. 1986).

Claims 54, 56-58, 60, 62, 63, 70-72, 75, 76, 78-80, 82, 84, 8592-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Santilli et al (US Patent 5,738,716).

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Santilli et al teach a color ink set comprising a first ink comprising a carrier and a bridged aluminum phthalocyanine as a cyan colorant, a second ink comprising a quinacridone pigment as a magenta colorant and a third ink comprising a carrier and a non-benzidine yellow pigment. A forth ink comprising pigment black 7 may also be included in the ink set (abstract, col. 1 lines 38-48). The ink set is intended to be used in three- or four color ink jet printers (col. 1 lines 57-60). The reference further teaches that the pigments that may be used in the set include Pigment Red 122 and Pigment Yellow 74 (col. 2 lines 39-44). The carrier is water or a mixture of water and a polyhydric alcohol present in the amount of 70 to 98 weight % and the pigment is present in the amount of 0.1 to 10% by weight (col. 5 lines 1-14). The reference further teaches that block copolymers are added in the amount of 0.2 to 5% by weight and includes the following structure:



(col. 5 lines 22-31). The reference discloses that the pigmented ink jet inks suitable for use with ink jet printing systems should have a surface tension in the range of 20 dynes/cm to about 60 dynes/cm (20 mN/m to 60mN/m). Control of surface tension in aqueous inks is accomplished by additions of small amounts of surfactants (col. 6 lines 60-66). The inks are ink jet printed wherein liquid ink drops are applied in a controlled to an ink receptive layer substrate, by ejecting ink droplets from the plurality of nozzles or orifices in a print head of ink jet printers. The reference further discloses that piezoelectric and thermal are systems that may be used with the ink compositions

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and that ink jet printing methods, and related printers are commercially available and need not be described in detail (col. 7 lines 28-45). The reference remains silent to the difference of surface tensions. However, it is the position of the Examiner that if the static surface tension is achieved with a surfactant claimed by Applicant that the composition would obviously have a similar dynamic surface tension to yield the difference of surface tension, absent tangible evidence to the contrary.

The reference fails to teach the specific formula set forth by structures V and XIII. However, it is a *Prima facie* obviousness for chemical compositions may be established by showing structural similarity in combination with similarity in chemical properties. *In re Merck* 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VERONICA FAISON GEE whose telephone number is (571)272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENZO/
Supervisory Patent Examiner, Art Unit 1793

/V. F. G./
Examiner, Art Unit 1793